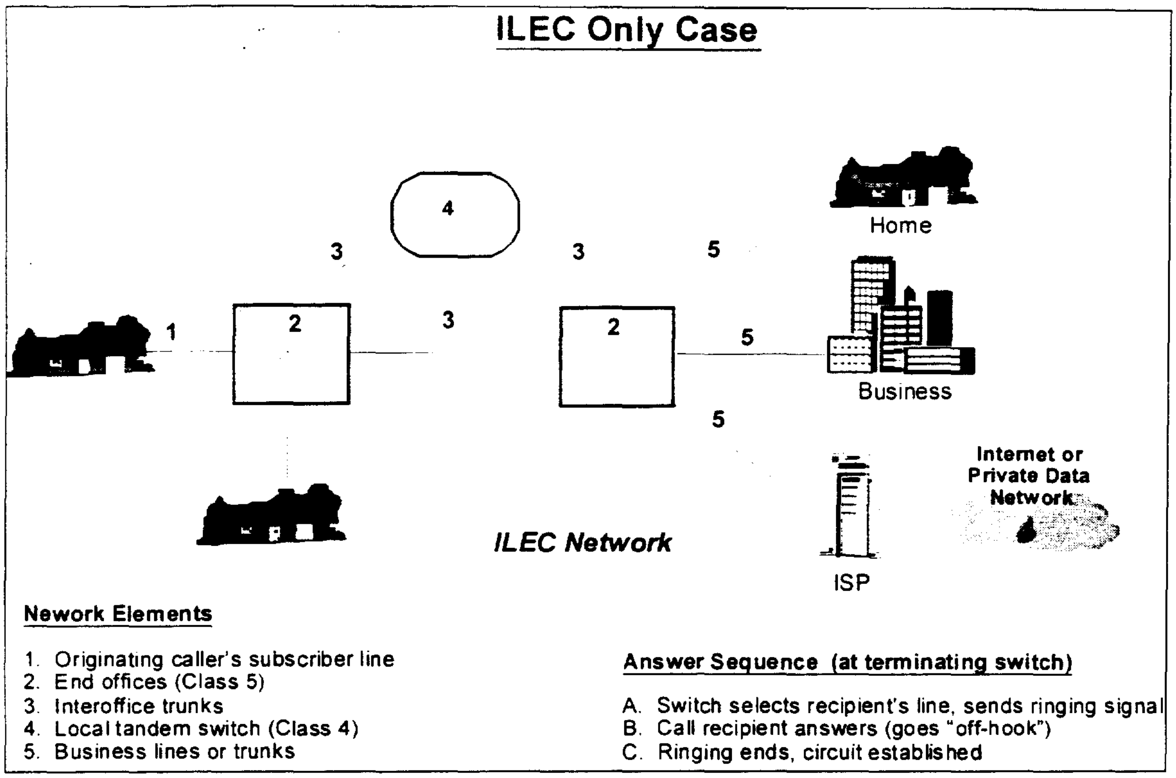

Figure 3. Routing a call to an ISP is technically identical to routing a call to any other local telephone number (Case 1: ILEC customer calls an ISP served by the ILEC).

As shown in Figure 4, where the call is directed to a customer (end user or ISP) served by a CLC, the originating LEC (typically an ILEC) routes the call from the originating Class 5 end office to a Class 4 tandem office from which it and other calls from other Class 5 end offices that are bound for the same CLC are aggregated and routed to the CLC's Point of Interconnection ("POI") with the ILEC. The CLC then routes the call from the POI through its network to its ISP customer.

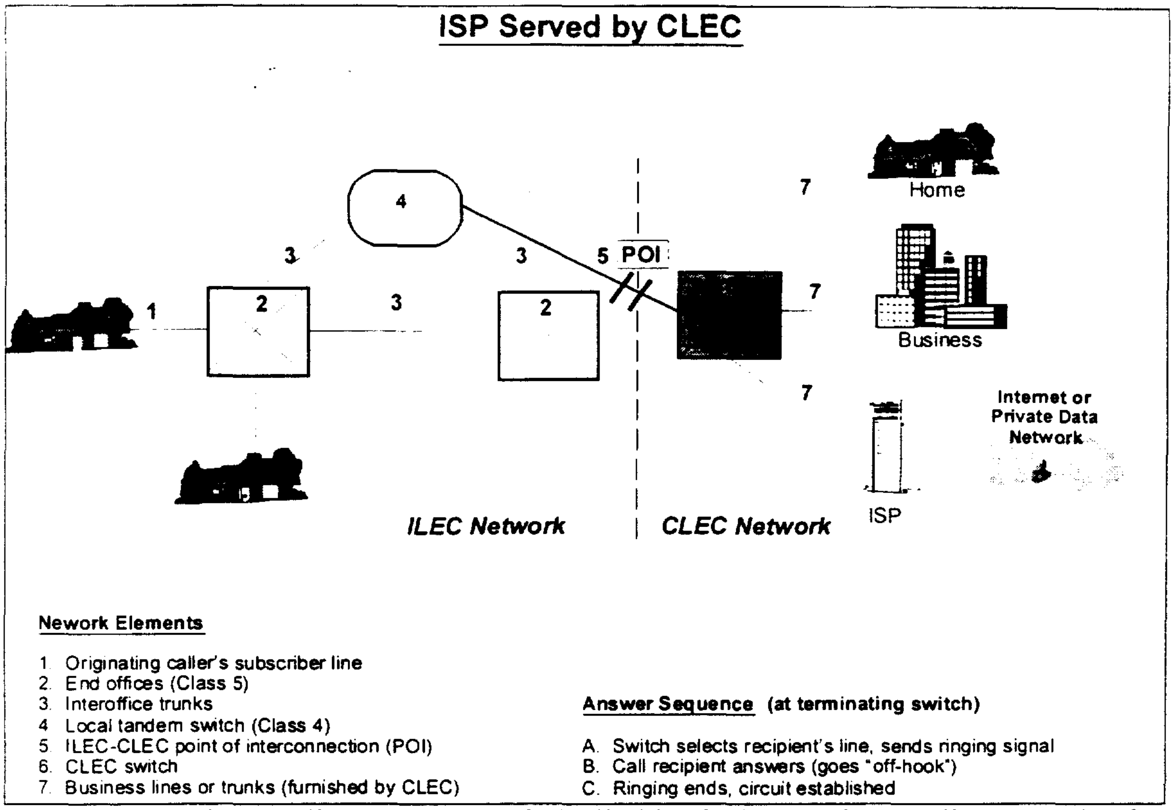

Figure 4. Routing a call to an ISP is technically identical to routing a call to any other local telephone number (Case 2: ILEC customer calls ISP served by a CLEC).

If the ISP is served directly by the ILEC, calls would be routed either from the originating Class 5 end office to a tandem office, and then to the terminating Class 5 end office from which the ISP's service is furnished, i.e., to which the ISP's access lines are connected, or directly to that end office via a Class 5-to-Class 5 interoffice trunk (Figure 3). Where a high volume of traffic exists between the originating and terminating end offices, the use of direct interoffice trunk routing that bypasses the tandem may in some cases be more efficient. The matter of direct vs. tandem routing is an economic decision for the ILEC to make based upon the volume and variability of the traffic, and the relative costs of direct trunking and tandem switching in each instance.

Q. Does the customer who originates calls to an ISP's modem bank perceive any distinction between these calls and "ordinary" voice calls?

A. No. From the consumer's perspective, an ISP-bound call is dialed just like any other local call. Also from the consumer's perspective, an ISP-bound call is covered under whatever local calling plan the consumer has chosen from his or her LEC. If the ISP's phone number is outside the consumer's local calling area, then toll charges apply. If it is within the consumer's local calling area but the consumer has elected to take measured local service, then measured local service rates apply. From the consumer's perspective, *there is no distinction between a local call placed to an ISP and a local call placed to a neighbor*; both are dialed in the same manner, priced in the same manner, and are included or not included in the consumer's local calling area on exactly the same basis. In economic terms, ISP-bound calls C specifically the portion of the call that is carried over the local public switched telephone network from the originating caller to the ISP C are "local" in nature and are fully embraced within the applicable state tariffs covering local exchange service.

Q. When an ISP-bound call is originated by a retail subscriber of Pacific or GTEC and routed to the central offices serving their own ISP affiliates, do they treat the call as local for rating purposes, as long as those two points are located in the originating caller's local calling area?

A. Yes, they do. In fact, the ISP affiliates of Pacific and GTEC, Pacific Bell Internet and GTE Net, routinely advertise the availability of toll-free local calling on the Web pages that market their Internet services to retail users. Pacific Bell Internet's website has a page that allows a user to find which of its dial-in numbers may be within the user's local calling area.[23] The GTE Net website has a page which allows a user to enter his or her home NPA-NXX (i.e., first six digits of the telephone number) or a state and obtain a listing of the nearest dial-up access numbers. A representative web page for California is provided in Figure 3 of my Exhibit.[24] As shown therein, before listing the dial-up access numbers, GTE Net directs potential ISP users to confirm the local treatment of the called number:

> In order to confirm that a number is local to you, please refer to the front pages of your local telephone book where the area codes and first three digits within your calling area are listed. Also, check with your local telephone company to find out if there is an extended calling plan available in your area that will allow you to connect locally to a nearby GTE Internet access number.
>
> Note: Be sure to check with your local phone company to make sure the numbers you choose are local, toll-free call from your area. Simply call the operator and ask whether the numbers are local or toll call.[25]

Clearly, if the Commission were to treat as non-local (and thus exclude from reciprocal compensation) the ISP-bound calls originated by Pacific and GTEC subscribers that are routed to ISPs served by CLCs, but allow local rating of such calls routed to ISPs served by the two ILECs, then the ILECs and their ISP affiliates would be afforded an enormous and unwarranted market advantage relative to the CLCs and their ISP customers.

Q. As a practical matter, do means exist today to reliably and accurately distinguish ISP-bound calls from other local data and voice calls?

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23. See http://public.pacbell.net/cgi-bin/findpops.cgi, accessed 5/15/2000. A copy of this webpage is supplied in my Figure 2 of my Exhibit.

24. See http://cgi.gte.net/dialin/results.asp, accessed 7/6/2000.

A. No, in fact, I am not aware of any ILEC proposing a method that could reliably and accurately distinguish ISP-bound calls from other forms of local traffic, despite ILECs' vigorous attempts to exclude ISP-bound calls from their reciprocal compensation obligations. Some ILECs have attempted to apply indirect methods to identify ISP-bound traffic after the fact, using billing records, analysis of call holding times and/or other means, but these approaches inject an unacceptably high degree of speculation and uncertainty into the results they can produce.

Moreover, the fact that modem pools may be shared among multiple subscribers, including ISPs and non-ISP businesses, means that ILEC attempts to identify all ISP-bound calls by associating telephone numbers with ISPs will necessarily fail. Mr. Goldstein explains this point in greater detail in his direct testimony.

Q. What would be required in order to establish an ISP-bound traffic identification system that would be sufficiently robust to support an exclusion of ISP-bound calls from reciprocal compensation?

A. The most basic requirement for such a system is that it must have a high degree of accuracy, i.e. it would have to minimize both false positives (calls identified as ISP-bound, which in fact are not) and false negatives (calls identified as other than ISP-bound, which in fact are ISP-bound calls). Both types of errors must be avoided, particularly in a context in which inter-carrier payments for call termination would depend upon whether or not the call was classified as ISP-bound. Second, the identification process should produce repeatable

25. *Id.*

results, meaning that the classification of any given call should come out the same each time the identification process would be applied to it. Third, the process should be verifiable, so that the affected CLC (as well as third parties such as the Commission) could review the accuracy of the ILECs' call classification results and propose corrections if necessary.

Q. Would an identification method that concluded that particular telephone numbers terminate to an ISP based upon statistical sampling, or that relied upon assumptions that all calls possessing particular traffic characteristics are ISP-bound, be adequate to identify ISP-bound calls for inter-carrier compensation purposes?

A. No, neither method would be adequate for that purpose, because neither system could guarantee that the calls terminated to *specific* CLC-served telephone numbers (and thus, specific CLC customers) would be correctly identified as ISP-bound . This is particularly clear in the latter case, because there is no combination of traffic characteristics (i.e., call duration, time-of-day, distance) that will uniquely mark a call as ISP-bound. For example, several ILECs have claimed that ISP-bound calls tend to have longer average call durations than non-ISP bound calls, but this is also likely to be true for other types of voice calls, such as second-line usage by teenagers, or for dial-up data calls by telecommuters that access a corporate computer network rather than the Internet. In fact, it is a logical fallacy to extrapolate from a group's average characteristics to the characteristics of individuals comprising that group. Thus, an identification method that assumed that all calls over 60 minutes in duration were ISP calls would be akin to inferring from the fact that, on average men are taller than women, to the conclusion that every person over six feet tall must be a man.

Moreover, an ILEC's failure to correctly classify ISP versus non-ISP usage could have unintended adverse effects on end users. Assume that a CLC provided local exchange service to a mix of ISP and non-ISP business customers using a total of 100 telephone numbers, 80 of which terminate onto ISP modem banks, and 20 of which terminate to ordinary business telephones or FAX machines. Suppose that the ILEC devised an ISP-bound traffic identification mechanism that correctly identified 75 of the ISP-terminated telephone numbers, but mis-classified the remaining five as non-ISP terminating numbers, and also mis-classified three of the 20 non-ISP numbers as terminating at an ISP. If the ILEC were to cease paying reciprocal compensation for calls to the telephone numbers that the ILEC identified as ISP, then the CLC might be forced to attempt to recover its costs of call termination directly from those customers. In that case, the ILEC's identification errors would produce a situation of unfair (and potentially unlawful) price discrimination: the CLC customer(s) subscribing to the three telephone numbers mis-classified as ISP would pay more to the CLC than similarly-situated, but correctly classified CLC customers, and the CLC customer(s) subscribing to the five telephone numbers that were ISPs, but mis-classified as non-ISPs, would pay less to the CLC than their ISP competitors. While I do not recommend the segregation of ISP-bound calls or treating those calls any differently than other local traffic subject to reciprocal compensation, any workable system would have to ensure that individual calls and/or telephone numbers were in all cases correctly identified as ISP-bound or not.

Termination of concentrated inbound traffic, including ISP-bound traffic, is more costly in certain respects than termination of dispersed (i.e., POTS-like) inbound traffic.

Q. How do the costs confronted by CLCs in terminating highly concentrated inbound traffic compare with the costs that ILECs either confront or could confront were their networks designed specifically to accommodate this type of usage?

A. While ISP-bound traffic cannot be identified or segregated *per se*, it is a subset of the class of concentrated inbound traffic, and some CLCs have targeted this general category of traffic as a market niche.

Terminating high concentrations of inbound traffic requires somewhat different switch engineering than terminating more dispersed traffic. Specifically, when an end office serves a significant fraction of lines that have a very high volume of inbound calls, the line-to-trunk concentration ratio in the switch must be reduced, meaning that more trunk ports must be in place for each line port. In a typical "POTS" end office serving an ILEC's average traffic mix, the concentration ratio is ordinarily in the range of 6:1 to 4:1, whereas the ratio for a high inbound-calling office may need to be reduced to 2:1 or even 1:1. In some cases, ISPs and other end users with heavy volumes of inbound calling may terminate their lines directly on the trunk-side of the switch.

Q. Have ILECs in the past contended that the costs associated with handling concentrated traffic are actually *greater* than the costs associated with handling a like volume of dispersed traffic?

A. Indeed, they have. In the course of lobbying the FCC to eliminate the exemption of enhanced services providers (ESPs)[26] from interstate access charges, Pacific and other ILECs submitted studies purporting to show that the concentrated nature of ISP-bound traffic has caused them to incur costs incremental to their ordinary call termination costs. In a "Pacific Bell ESP Impact Study" filed with the FCC in July 1996, Pacific claimed that the growth of ESPs had "caused Pacific Bell to incur additional costs to increase network capacity as Pacific has already identified $13.6-million in central office reengineering costs for 1996 associated with providing business lines to ESPs. These costs are over and above the normal growth expenditures associated with comparable quantities of business lines provisioned for typical business customers."[27]

In June 1996, Bell Atlantic filed a study with the FCC that addressed the impacts of increased Internet usage.[28] Similar to Pacific, Bell Atlantic contended that serving ISPs with high levels of inbound calling caused it to incur increased investments in traffic-sensitive facilities to accommodate the termination of that traffic, and specifically concluded that "the network elements most affected by heavy traffic loads from ISPs are line units, switch modules and interoffice trunking."[29]

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26. The category of enhanced services providers encompasses Internet service providers and other suppliers of on-line services.

27. Pacific Bell ESP Impact Study, attached to July 2, 1996 Letter from Alan F. Ciamparcaro, Pacific Telesis Vice President, to James D. Schlichting, Chief of FCC Competitive Pricing Division. This study is provided in Figure 4 of my Exhibit.

28. Report of Bell Atlantic on Internet Traffic, attached to June 28, 1996 Letter from Joseph J. Mulieri, Bell Atlantic Director – FCC Relations, to James D. Schlichting, Chief of FCC Competitive Pricing Division ("BA Internet Usage Study").

29. Id. at 14.

While some aspects of these studies are flawed,[30] they do provide some evidence that ILECs' avoided costs for termination of concentrated traffic, including ISP-bound traffic, are actually *higher* than a rate based solely upon an ILEC's forward-looking economic cost for terminating all traffic (both concentrated and relatively dispersed traffic).

Q. Some ILECs have argued that the longer average call durations for ISP-bound calls causes those calls to have a lower-than-average termination cost, because the costs of the switching set-up function are recovered over more minutes per call. Do these arguments square with the contentions that you have just discussed?

A. Clearly they don't. In any event, if call set-up were a significant cost element, this matter could be easily addressed in the reciprocal compensation rate structure. While the ILECs' dictated reciprocal compensation rates have almost universally ignored call set-up as a rate element, there is no particular reason why this cost component, if it is consequential at all, could not be captured in a separate call set-up reciprocal compensation charge that, like the per-minute rate, would apply symmetrically in both directions. In fact, Pacific's approved TELRIC-based prices for unbundled switch usage make precisely such a distinction.[31] I am not aware, however, that Pacific or any other ILEC has actually proposed a separate rate element to recover call setup costs for

30. In particular, the Pacific and Bell Atlantic studies, as well as similar studies prepared in the same timeframe by US West, NYNEX, and BellCore, failed to perform proper comparisons of the total revenues and costs associated with increased ESP/Internet usage, and thus did not substantiate their claims that the ESP exemption should be discontinued. See Selwyn, L. and Laszlo, J., "The Effect of Internet Use on the Nation's Telephone Network," January 22, 1997, at pages 35-49.

31. CPUC Decision D.99-11-050, November 18, 1999, Appendix A ("Summary of Unbundled Network Element Recurring Prices"), page 2.

reciprocal compensation purposes, even where the ILEC was complaining about the effects of long-duration calls on its reciprocal compensation obligations.

While CLC networks tend to employ a different mix of facilities than ILEC networks, they provide the same functionality for local telecommunications traffic (including ISP-bound calls) as do ILEC networks, including the interexchange carriage of traffic performed by ILECs' tandem switches and shared transport.

Q. Dr. Selwyn, can you please summarize the major architectural features of ILEC and CLC local networks?

A. Yes. The local telephone networks of both ILECs and CLCs are comprised of the same three principal components, namely:

- *Subscriber loops* C dedicated facilities interconnecting the local exchange carrier wire center with the subscriber's premises;

- *End office switches* C the switching systems at which individual subscriber loops terminate and which interconnect subscribers with each other and with interoffice and interexchange network facilities; and

- *Interoffice network* C trunking and switching facilities that provide interconnections among end offices and between end offices and other telecommunications carriers.

The principal architectural differences between ILEC and CLC networks arise largely in the relative *mix* of these various network components.

Q. Please explain.

A. ILEC networks have been built up over more than a century and generally consist of a large number of end offices that are physically located in relatively close geographic proximity to the subscribers they directly serve. For example, Pacific currently operates approximately 752 local end office ("Class 5") switches in its California service areas,[32] at which subscriber loops are terminated and connected. GTEC operates 330 Class 5 switches in California.[33] When a call involves customers served by different end offices (for example, customers located in different communities), completion of the call requires that it be routed between the two end offices over an interoffice trunk. In order to avoid deploying dedicated interoffice trunks between every possible pair of ILEC end offices, in most cases individual end offices are interconnected (via interoffice trunks) to an intermediate switching point known as a "tandem" office. The tandem switch (sometimes referred to as a "Class 4" switch in the North American network hierarchy) can then interconnect any of the individual end offices to which it is directly trunked. Where the end offices involved in a particular call are trunked to (subtend) *different* tandem switches, the call is completed via an interoffice trunk between the two tandems. In certain situations in which particularly high volumes of traffic exist within pairs of end offices, direct interoffice trunks may be used to connect the two end office switches involved.

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32. FCC ARMIS Database, Report 43-07, Table I: Switching Equipment, for Pacific Bell (COSA "PTCA"), row 111 (year-end 1999 local switches in Pacific's California serving area equals 752). Source: http://gullfoss.fcc.gov:8080/cgi-bin/websql/prod/ccb/armis1/forms, accessed 7/7/2000.

33. FCC ARMIS Database, Report 43-07, Table I: Switching Equipment, for GTEC (COSA "GTCA"), row 111 (year-end 1999 local switches in GTEC's California serving area equals 330). Source: http://gullfoss.fcc.gov:8080/cgi-bin/websql/prod/ccb/armis1/forms, accessed 7/7/2000.

Q. Why might not a CLC network adopt this same type of design?

A. The differences between ILEC and CLC network architectures are best explained in terms of the relative economics of switching vs. transport.

Q. Are switching and transport economic substitutes for one another?

A. In some cases, yes. Another way of looking at the principal network components is in terms of their primary functions of switching and transport. Subscriber loops support a transport function, carrying traffic between the customer's premises and the serving wire center; interoffice trunks also provide a transport function, carrying traffic from one switch to another. Switching and transport facilities are often economic substitutes for one another; for example, as I described above, by introducing a tandem switch to interconnect a number of individual end offices, one avoids the need to deploy direct interoffice trunks between every possible pair of end offices on the ILEC's network. Similarly, by deploying end office switching facilities in close geographic proximity to the individual subscriber, it is possible to concentrate traffic on a smaller complement of transport facilities than would be possible if, for example, individual switches are used to serve subscribers located across a large geographic area.

The specific mix of switching vs. transport facilities in a network thus depends heavily upon the relative cost of each and the overall scale of operations of the network. ILECs such as Pacific and GTEC serve millions of individual subscribers statewide and can thus afford to deploy relatively efficient, large-scale switching systems in close geographic proximity to their customers. CLCs typically serve a customer population that is a minute fraction of the size of the ILEC's customer base. In order to achieve switching efficiencies, CLCs will typically deploy a relatively small number of large switches, and so must transport their customers' traffic over relatively large distances.

This switching vs. transport trade-off has always been present in telecom network design: You can generally reduce switching costs by concentrating demand in a small number of large switches, but by so doing you increase the transport capacity that is required to connect the switches to customers over greater distances. In recent years, however, the scales have been tipped C *shoved* would probably be a better word C decidedly in the direction of substituting transport for switching. Transport costs have become far less distance-sensitive and, with the use of high-capacity fiber optics, massive amounts of capacity can be deployed at little more than the cost of more conventional transport capacity sizes. ILECs have been consolidating multiple switches into large main frame/remote configurations. In the case of CLCs, the substantially smaller scale of their customer base and traffic load makes any other approach infeasible as an economic matter.

Q. How might a typical CLC network be designed?

A. In the case of a typical CLC network, Unbundled Network Element (UNE) loops leased from ILECs and CLC-owned subscriber loop facilities are collected at centralized locations in each community in which the CLC offers service. At these collection points, the traffic is concentrated onto high-capacity transport facilities (that may be leased from the ILEC or from other carriers or owned by the CLC itself) for the sometimes long trip to the CLC switch. There are several different types of concentration arrangements that may be used, depending upon the aggregate amount of traffic that is involved. For relatively low-volume situations, passive multiplexing of the individual subscriber loops onto specific dedicated channels in the high-capacity "pipe" may be most efficient; in other cases, small stand-alone switches or Remote Service Units (RSUs) subtending the distant Host Switch may be deployed. Where the CLC's customers are concentrated within a small, relatively confined area (e.g., within a shopping mall), a small PBX-like switch may be used to interconnect individual end users with a common pool of facilities for the trip to the CLC central office switch.

Q. Does this have implications for the application of tandem versus end office switching rates for the reciprocal compensation arrangements between CLCs and ILECs for termination of local ISP-bound calls and other forms of local traffic?

A. Yes, it does. Because CLCs operate at a much smaller scale than do ILECs, CLCs typically deploy fewer switches than ILECs, and utilize more transport between the end user and their serving switch. Therefore, the geographic coverage for a CLC's switches will tend to be significantly larger than that for an ILEC end office switch, and instead will be comparable to that of an ILEC tandem switch.

Q. Where a CLC's network architecture does not employ tandem switches, should it be compensated on the basis of the "end office" or the "tandem" rate for its termination of ILEC-originated local traffic destined to an ISP or other CLC customer?

A. The basis for compensation should be the extent of the geographic area covered by the terminating carrier beyond its point of interconnection with the originating carrier, irrespective of the network architecture that may be involved in transporting the call from the point of interconnection to its ultimate PSTN destination.

Where a call is terminated to an ILEC, the POI is typically at a tandem switch, from which the ILEC can route the call to individual end offices and then on to the ultimate recipient. When a call is terminated to a CLC that maintains only one or at most a handful of central offices covering a wide geographic area, the transport function is carried out on the "line side" of the switch, sometimes over considerable distances, until it reaches its final destination. By delivering the traffic to the POI, the originating carrier can have the call terminated to anywhere within approximately the same geographic area, since the CLC's single switch may provide the same geographic coverage as a dozen or more ILEC switches. The CLC has adopted a network design that is most efficient given its size and the technology available to it at the time that its network was initially laid out, but that choice of network design should have no effect, one way or the other, on the price that the ILEC pays the CLC for call terminations.

For example, when Pacific hands off traffic to Pac-West for termination, Pac-West is able to complete the call to any of the communities served by its switch, despite the fact that no physical tandem switch is involved. Thus, in terms of traffic aggregation and geographic reach, Pac-West provides full tandem functionality to Pacific for traffic it delivers to Pac-West, and should properly be compensated at the tandem reciprocal compensation rate.

Q. Has the FCC adopted this principle?

A. Yes, it has. In fact, the FCC's reciprocal compensation rules require the application of the ILEC's tandem interconnection rate in such circumstances. Specifically, Section 51.711(a)(3) of the FCC's rules states that:

> (3) Where the switch of a carrier other than an incumbent LEC serves a geographic area comparable to the area served by the incumbent LEC's tandem switch, the appropriate rate for the carrier other than an incumbent LEC is the incumbent LEC's tandem interconnection rate.[34]

However, even if this Commission determines that ISP-bound traffic exchanged between ILECs and CLCs should be subject to compensation arrangements other than the federally-mandated reciprocal compensation framework, the economic rationale that I have just described for application of the tandem interconnection rate remains equally valid for ISP-bound traffic, and I would recommend adoption of that principle by the Commission.

Q. What other implications do the varying network architectural characteristics of ILECs and CLCs have?

A. There are in fact two principal sources of cost variation as between a CLC and an ILEC with respect to the provision of local exchange service and, in particular, the costs of transporting and terminating local calls: *scale* and *facilities mix.*

Scale. The overall cost of constructing and operating a telecommunications network are heavily impacted by the overall volume of traffic and number of individual subscribers

34. 47 CFR 51.711(a)(3). Source: http://frwebgate.access.gpo.gov/cgi-bin/get.cfr.cgi, accessed 6/2/2000.

that the network is designed to serve; that is, telecom networks are characterized by substantial *economics of scale and scope*. As I have previously noted, CLCs serve a far smaller customer population and carry far less traffic than do ILECs. Because they are necessarily forced to operate at a far smaller scale, CLC networks may exhibit higher average costs than ILEC networks.

Q. Are there other ways in which a CLC's relatively small scale of operations may affect the level of its costs?

A. Yes. The effects of these scale and scope economics are further compounded by the fact that ILECs C particularly large ones such as SBC, the parent company of SWBT C are able to purchase switching, transport and other network components at a far more favorable price than their much smaller CLC rivals. For example, testimony offered by SBC in the 1998 Connecticut DPUC proceeding to consider the Joint Application of SBC and SNET for approval of their merger[35] indicated that following the merger SNET's costs of equipment purchases would decrease substantially due to the increased purchasing power of SBC relative to that of a stand-alone SNET. Specifically, SBC indicated that it expected cost savings synergies from the merger "particularly from using SBC's scope and scale to drive costs out of the business." SBC stated that it has "learned from the SBC/Pacific Telesis merger that scope and scale, especially in the purchasing area, are tangible and significant."[36] SBC's Chief Financial Officer also stated that "we

35. *Joint Application of SBC Communications, Inc. And Southern New England Telecommunications Corporation for Approval of a Change of Control*, Connecticut Department of Public Utility Control Docket No. 98-02-20.

36. *Id.* SBC Response to MCI-4, Exhibit A, □Introduction and Opening Comments of Don (continued...)

know that SNET pays over 20 percent more for purchases of switching and transport equipment than we do at SBC."[37] SBC also indicated that the savings experienced in contract negotiations to date for the combined SBC/Pacific Telesis "tend to support the consultants' estimates" during the SBC/PTG merger discussions of procurement savings (expense and capital) in the 7%-10% range.[38]

Of course, a stand-alone SNET, with some 2.3-million residential and business access lines in Connecticut, is itself still much larger than many CLCs. Accordingly, it is entirely reasonable to expect that, without the volume discounts available to a large ILEC such as Pacific Bell, a CLC will experience higher capital-related costs.

A CLC's capital-related costs will also tend to exceed the corresponding ILEC items due to the substantially greater level of risk that investors ascribe to CLCs. CLCs can thus expect to confront higher costs of debt and equity capital as well as the need to recover their capital investments over a somewhat shorter period of time than would be required for an ILEC with more stable and predictable demand.

Mix. All else being equal, a CLC's network will typically consist of relatively less switching and relatively more transport than would an ILEC network. While switching costs are sensitive both to the number of call set-ups as well as to aggregate call duration,

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Kiernan," January 5, 1998, SBCSNET004573.

37. *Id.*

38. *Id.* SBC Response to OCC-12. However, according to a study conducted by SBC, procurement savings had originally been estimated at only 3% for the SBC-PacTel merger. *See* California Public Utilities Commission, 96-05-038, *In the Matter of the Joint Application of Pacific Telesis Group ("Telesis") and SBC Communications Inc. ("SBC") for SBC to Control* (continued...)

transport costs tend to vary primarily with duration. Accordingly, it is reasonable to expect that CLC local usage costs, for ISP-bound local calls and other types of local traffic, will exhibit proportionately greater duration-sensitivity and proportionately less set-up sensitivity than do ILEC usage costs.

The appropriate inter-carrier compensation for the termination and transport of ISP-bound local calls, as well as other forms of local traffic, is a symmetric rate based upon the ILEC's prevailing TELRIC cost level, which creates incentives for continual reductions in the costs of call termination services and harms neither ILECs nor end users.

Q. When the FCC devised its rules for reciprocal compensation between ILECs and CLCs for the exchange of local traffic, what principle did the FCC adopt concerning the use of a symmetric rate?

A. In the *First Report and Order*[39] establishing the FCC's rules for reciprocal compensation for the exchange of local traffic, the FCC determined that the rates applied for reciprocal compensation purposes should be *presumptively symmetric* and based upon the ILEC's costs, unless a CLC believes that its own costs are greater. The specific rule implementing this requirement is 47 CFR ' 51.711(b), which provides that:

> A state commission may establish asymmetrical rates for transport and termination of local telecommunications traffic only if the carrier other than the incumbent LEC (or the smaller of two incumbent LECs) proves to the state commission on the basis of a cost study using the forward-looking economic cost

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Pacific Bell, Decision 97-03-067, March 31, 1997, at 30.

39. *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, First Report and Order, 11 FCC Rcd 15499 (1996) (*Local Competition Order*), aff'd in part and vacated in part sub nom., *Competitive Telecommunications Ass'n v. FCC*, 117 F.3d 1068 (8th Cir. 1997) and *Iowa Utils. Bd. v. FCC*, 120 F.3d 753 (8th Cir. 1997), aff'd in part and remanded, *AT&T v. Iowa Utils. Bd.*, 119 S. Ct. 721 (1999).

> based pricing methodology described in Secs. 51.505 and 51.511, that the forward-looking costs for a network efficiently configured and operated by the carrier other than the incumbent LEC (or the smaller of two incumbent LECs), exceed the costs incurred by the incumbent LEC (or the larger incumbent LEC), and, consequently, that such that a higher rate is justified.

The rules in Section 51.505 and 51.511 referenced therein define the "forward-looking economic cost" that is to be the basis for pricing, in terms of the FCC's "total element long run incremental cost" (TELRIC) methodology plus a reasonable allocation of forward-looking common costs. Thus, the FCC allows a CLC to rebut the presumptive symmetric rate by filing its own TELRIC-based cost study if the CLC believes its transport and termination costs are *higher* than the ILEC's.[40] The FCC did not contemplate the filing of separate CLC cost studies in the event a CLC's costs were *lower* than the ILEC's.

Q. Is it appropriate to apply the same type of presumptive symmetry framework to the rates for the inter-carrier compensation for transport and termination of ISP-bound local calls, even if the Commission decides to treat ISP-bound calls separately from other forms of local traffic for reciprocal compensation purposes?

A. Yes, it is. Whether or not the Commission determines that the FCC's reciprocal compensation rules are directly applicable to local (or for our present purposes, at least toll-free) ISP-bound calls, their underlying economic justification applies with undiminished force.

First, Section 252(d)(2)(ii) of the *Telecommunications Act* requires that inter-carrier

40. See also the *Local Competition Order* at para. 1089 for elaboration of this point.

charges for the transport and termination of traffic must reflect "a reasonable approximation of the additional costs of terminating such calls." As a forward-looking, long run incremental costing methodology, the TELRIC-based approach, as defined by the FCC and implemented by the CPUC, satisfies this requirement. During the FCC's consideration of this issue, some ILECs, including GTEC's parent company GTE Service Corporation (GTE), argued that application of a symmetric reciprocal compensation rate based upon the ILEC's costs would violate this provision of the Act.[41] The FCC correctly rejected those arguments, since Section 252(d)(2)(ii) does not require precise identification of each carrier's call termination costs, but instead a reasonable approximation which is afforded by the ILEC's forward-looking cost level.[42]

Second, adopting a symmetric rate based upon the ILEC's TELRIC cost level minimizes the ILEC's incentives for strategic gaming of its termination rate. If the ILEC's claimed costs are overstated, the resulting symmetric rate would create opportunities for CLCs to pursue customers with high volumes of inbound traffic, and thereby become net recipients of (overstated) termination charges. If the ILEC understates its costs, CLCs could pursue outbound traffic-oriented customers, and thus pay (understated) termination charges.[43] The FCC concluded similarly that "symmetrical rates may reduce an incumbent LEC's ability to use its bargaining strength to negotiate excessively high termination charges that competitors would pay the incumbent LEC and excessively low

41. *Local Competition Order* at para. 1072.
42. *Id.* at para. 1085.
43. In fact, it appears that Pacific and other ILECs pursued the first strategy during their initial arbitrations with CLCs, thereby stimulating CLCs' targeting of in-bound calling services markets.

termination rates that the incumbent LEC would pay interconnecting carriers."[44] Clearly, the FCC intended that, by requiring symmetry, the result would approximate the classic "you cut, I choose/I cut, you choose" form of negotiation, which provides both parties with the incentive to "divide the pie" equally between them.

The ILEC's TELRIC cost level represents the ILEC's avoided cost of termination, which would otherwise be incurred by the ILEC; consequently, if it is used to establish a symmetric termination rate, the ILEC should be indifferent as an economic matter to whether it or a CLC completes the ISP-bound calls. That is, if the ILEC is the net recipient of traffic, it will be compensated for its work at a rate than accurately reflects the actual costs it incurs; conversely, if the CLC is the net recipient, then the ILEC will *avoid* costs precisely in proportion to the quantity of traffic that is delivered to the CLC for termination.

In addition, use of a symmetric rate based upon the ILEC's TELRIC cost level creates incentives for all carriers, including CLCs, to find innovative ways to reduce their costs below that level. The FCC also recognized the possibility that CLCs' own termination costs may be lower than the level implicit in the symmetric rate, finding that (*id.*, para. 1086) "a symmetric compensation rule gives the competing carriers correct incentives to minimize its own costs of termination because its termination revenues do not vary directly with changes in its own costs". Nothing in the FCC's rules suggested that the symmetric reciprocal compensation rate would subsequently be adjusted based upon the *CLC's* (lower, more efficient) costs, as Pacific and GTEC are here seeking to accomplish.

44. *Local Competition Order* at para. 1087.

Thus, the FCC correctly viewed the possibility of CLCs lowering their own termination costs below the symmetric rate (and thereby receiving payments higher than their forward-looking economic costs) as a *positive* development and a consequence of competition and innovation.

The regulatory principles established in this Commission's New Regulatory Framework (NRF) do not permit ex-post adjustments of rates based upon subsequent reductions in cost.

Q. Has this Commission also supported the regulatory goals of increasing LECs' operating efficiency, reducing costs, and encouraging innovation in technology and services?

A. Yes, it certainly has. This Commission has had a longstanding policy of encouraging cost-reducing behavior through such incentives, such as in its New Regulatory Framework (NRF) decisions. When the Commission originally established incentive regulation for Pacific and GTEC in its first NRF decision (D.89-10-031 in I.87-11-033), it did so in order to achieve several defined regulatory goals, including Economic Efficiency, Encouragement of Technological Advance, and Full Utilization of the Local Exchange Network.[45] The Commission concluded that the type of regulatory framework that it adopted "provides the best balance of encouraging efficient operations while protecting monopoly ratepayers."[46] Moreover, the Commission crafted certain elements

45. *See* 33 CPUC 2d, 43, 92-115. The other regulatory goals cited by the Commission (*id.*) were Universal Service, Financial and Rate Stability, Low Cost, Efficient Regulation, and Fairness.

46. *Id.* at 215 (Finding of Fact Number 21).

of the original NRF plan (specifically, the benchmark rate of return and "stretch" component of the productivity offset factor) so that it "creates a strong incentive for the utility to achieve and then exceed the productivity target...."[47] The Commission also concluded that the NRF plan was preferable to traditional rate of return regulation because, among its advantages, the NRF plan "provides strong profit-driven efficiency incentives which could lead to even greater rate reductions."[48]

Other than rate adjustments accomplished through the application of the NRF annual price cap adjustment mechanism, there is no provision in the NRF for service-specific rate decreases based upon service-specific cost reductions. In other words, there is nothing in the NRF that would require Pacific or GTEC to reduce their respective reciprocal compensation rates merely because their costs have decreased; such reductions may only be required in the aggregate context of the NRF rate adjustment process. In fact, in D.95-12-052, the Commission actually eliminated the productivity offset from the NRF price cap adjustment formula, thereby further dissociating ongoing rate decreases from actual cost decreases.[49] The Commission also declined to require that either Pacific or GTEC flow-through actual cost savings realized from their respective mergers in end-user rates or rate levels. A policy that would require CLCs to reduce their symmetric reciprocal compensation rates below those charged by Pacific on the theory that the CLCs have become more efficient than Pacific in handling this traffic (which may or may not be the case) is fundamentally inconsistent with the treatment afforded Pacific and GTEC under the NRF.

47. *Id.* at 217, FOF Number 54.
48. *Id.* at 220, FOF Number 109.